

Record Clutch Size for *Chelydra serpentina*
(Testudines: Chelydridae) in Virginia

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ABSTRACT—A record clutch size of 67 is reported for a common snapping turtle (*Chelydra serpentina serpentina*) from Charles City County, Virginia, 12 larger than previously reported for this chelonian. The new average for this species in the Commonwealth is 29.9 ± 16.6 ($\bar{x} \pm SD$).

The snapping turtle (*Chelydra serpentina*) occurs from Florida north to southern Canada and Nova Scotia in eastern North America and from the Mexican border north to extreme southern Saskatchewan in western North America (Conant and Collins 1991, Iverson 1992, Russell and Bauer 1993). Clutch size varies latitudinally, with the largest sizes reported for northern populations in Canada, South Dakota, and Nebraska (Zug 1993; J. B. Iverson, Earlham College, personal communication). Ash (1951) reported an average clutch size of 28.6 and a range of 13-48 for 85 specimens presumably caught in the Virginia area. However, these data were presented only in an abstract. A complete paper was never published, and no documentation is available for us to determine the source of his specimens. Information provided by the late John T. Wood (formerly a retired medical doctor in Victoria, British Columbia and Virginia in the 1950s, personal communication) indicated that Ash's specimens could have been from multiple locations in and out of Virginia. Mitchell (1994) reported an average clutch size of 27.0 ± 13.2 (range = 7-55) for 13 females collected from various locations in Virginia.

On 3 June 1994, a gravid female (271-mm carapace length, 201-mm plastron length) was inadvertently killed by a vehicle at Harrison Lake National Fish Hatchery, Charles City County, Virginia. Subsequent dissection revealed 67 shelled eggs. One egg

was opened on the date of collection, and the rest were placed in a closed plastic container with a 3:1 mixture of top soil and vermiculite. The soil was kept moist during the incubation period so that the relative humidity was maintained at nearly 100%. Incubation temperatures varied from 25 to 30° C. During the course of incubation, 12 of the 66 eggs died and were discarded; 54 eggs survived. Hatching commenced on 20 August (78 days incubation), and the last egg pipped on 24 August (82 days). Hatchlings showed considerable variation in development, with larger individuals bearing a small yolk sac and smaller individuals bearing a large, cumbersome yolk sac. Of the 54 hatchlings, four failed to survive through yolk sac absorption. The remaining turtles began exogenous feeding as their yolk sac diminished, taking a diet of chopped nightcrawlers and miscellaneous live aquatic macroinvertebrates collected from ponds. The surviving juvenile turtles were released the following spring.

A documented clutch size of 67 eggs is 12 larger than the largest reported for Virginia (Mitchell 1994). Incorporation of the large clutch size reported here yields a new state average of 29.9 ± 16.6 (range = 7-67). The maximum known clutch size for Virginia populations lies between those known for northern populations (83: Quebec (Bleakney 1957); 73: New York and Wisconsin (Yntema 1970); 109: Nebraska (Packard et al. 1990)) and southern populations (43: North Carolina (Brown 1992); 21: Florida (Punzo 1975)).

Reports of average clutch sizes for snapping turtles in different geographic areas based on small sample sizes should be used with caution. Such averages will almost always change with additional data.

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